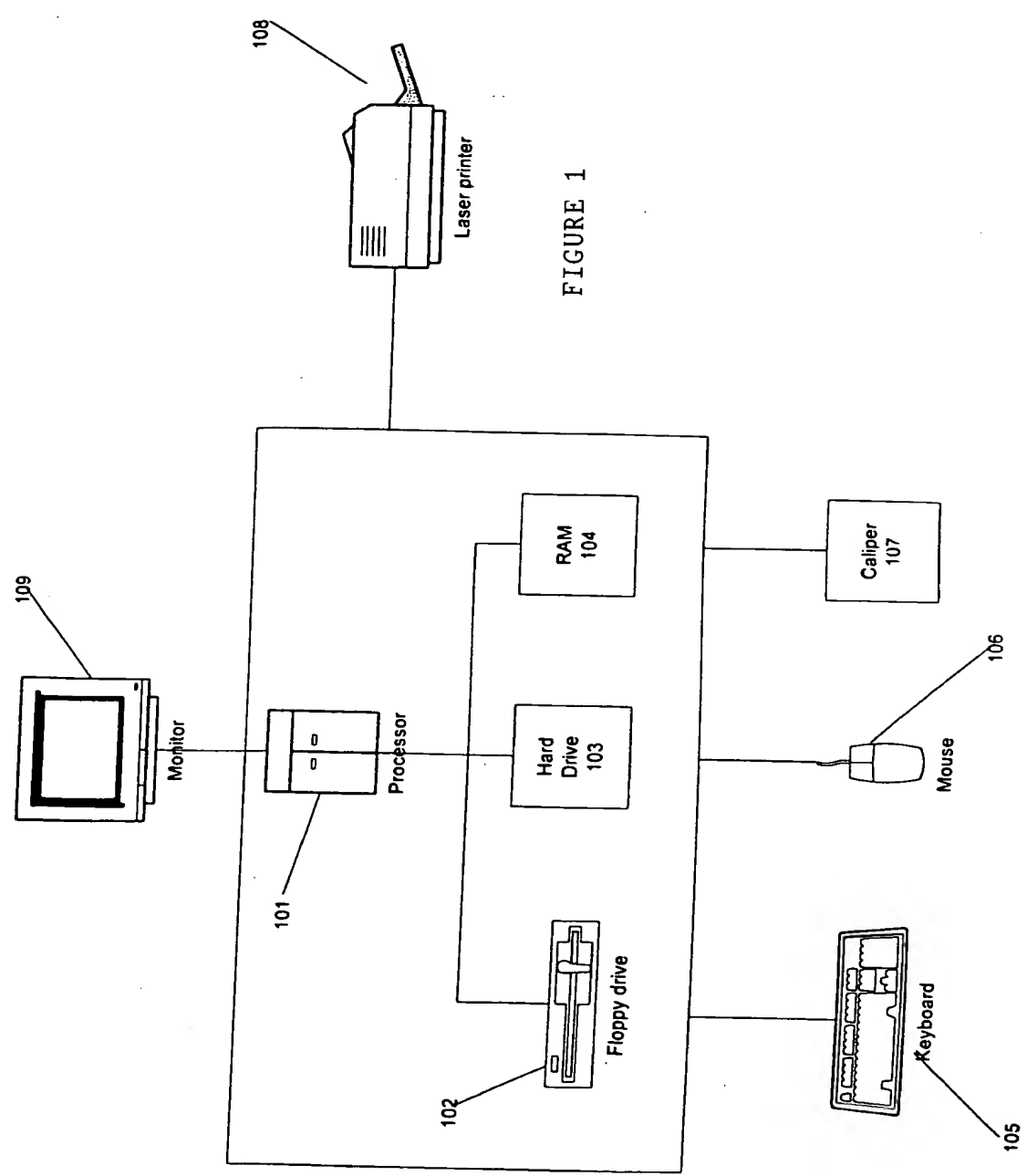


UNITED STATES



09851819-031001

H.A.T.S. - Patient Information

Reset Caliper Color

Patient Name

Age Gender

Missing Teeth

Malformed Teeth

Doctor or Staff Performing Analysis

NOTE:
If a tooth is malformed or missing, it is recommended that a "zero" be entered into the analysis. The resulting correction necessary will indicate the size of the replacement tooth or teeth necessary to eliminate the discrepancy.

Figure 2A

H.A.T.S. - Patient Information

Reset Caliper Color

Pat

Age Gender

Missing Teeth

Malformed Teeth

Doctor or Staff Performing Analysis

NOTE:
If a tooth is malformed or missing, it is recommended that a "zero" be entered into the analysis. The resulting correction necessary will indicate the size of the replacement tooth or teeth necessary to eliminate the discrepancy.

Figure 2B

H.A.T.S.

Reset

Analysis Type

201 ☒ 6 Tooth

202 ☒ 12 Tooth

203 ☒ Input Tooth Sizes

204 ☒ Input Sums

Calculate

Print

UPPER TOOTH	3	4	5	6	7	8	9	10	11	12	13	14
AVERAGE SIZE	10.40	6.84	7.04	7.91	6.96	8.82	8.82	6.96	7.91	7.04	6.84	10.40
MEASURED SIZE	0	0	0	7.88	5.52	8.72	8.74	5.56	7.86	0	0	0

LOWER TOOTH	3	4	5	6	7	8	9	10	11	12	13	14
AVERAGE SIZE	11.14	7.27	7.15	6.93	5.94	5.42	5.42	5.94	6.93	7.15	7.27	11.14
MEASURED SIZE	0	0	0	6.86	5.87	5.36	5.38	5.88	6.84	0	0	0

	Total Anterior	Average	Total Overall	Average
207 Upper Sum	44.28	47.38	0	95.94
208 Lower Sum	36.19	36.58	0	87.70

209

210

Back

Figure 2C

H.A.T.S. - Analysis Summary

Upper Sum 44.28 ~ 213

Lower Sum 36.19 ~ 214

Recommended Correction:

Increase upper tooth structure by 2.6 mm ~ 215

Reduce lower tooth structure by 2.01 mm ~ 216

GAC Patient Specific Arch Size: SMALL ~ 217

Figure 2D

```

graph TD
    START([START]) --> InputN[/Input N, 6 or 12/]
    InputN --> N6{N = 6?}
    N6 -- Yes --> R0772[R = 0.772]
    N6 -- No --> N12{N = 12?}
    N12 -- Yes --> R0913[R = 0.913]
    N12 -- No --> InputN
    R0772 --> Entering{Entering individual tooth-size?}
    R0913 --> Entering
    Entering -- No --> InputU[/Input Maxillary Sum, U/]
    Entering -- Yes --> InputUmax[/Input maxillary tooth-sizes and calculate sum, U/]
    InputUmax --> InputLmax[/Input mandibular tooth-sizes and calculate sum, L/]
    InputU --> InputLmax
    InputLmax --> CalcXY[ $X = U/R - U$   
 $Y = (R \times U) - L$   
Round X to nearest hundredth]
    CalcXY --> X0{X > 0?}
    X0 -- No --> OutputXmax[/Output reduce maxillary arch by the rounded X/]
    X0 -- Yes --> OutputXmaxinc[/Output increase maxillary arch by the rounded X/]
    OutputXmaxinc --> RoundY[Round Y to nearest hundredth]
    RoundY --> Y0{Y > 0?}
    Y0 -- No --> OutputYminb[/Output reduce mandibular arch by the rounded Y/]
    Y0 -- Yes --> OutputYmaxb[/Output increase mandibular arch by the rounded Y/]
    OutputXmax --> RoundY
    OutputYminb --> RoundY
    OutputYmaxb --> RoundY
    RoundY --> OutputU[Output:  
Small if U is 44.5mm or less  
Medium if 44.5 < U < 49.4  
Large if U is 49.4 or more]
    OutputU --> END([END])
  
```

The flowchart illustrates a process for dental arch analysis. It begins with a 'START' terminal, leading to an input step 'Input N, 6 or 12'. A decision diamond 'N = 6?' follows. If 'Yes', it proceeds to 'R = 0.772'. If 'No', it goes to 'N = 12?'. If 'Yes' to 'N = 12?', it proceeds to 'R = 0.913'. If 'No' to 'N = 12?', it loops back to 'Input N, 6 or 12'. Both 'R' values lead to a decision 'Entering individual tooth-size?'. If 'No', it goes to 'Input Maxillary Sum, U'. If 'Yes', it goes to 'Input maxillary tooth-sizes and calculate sum, U', which then leads to 'Input mandibular tooth-sizes and calculate sum, L'. Both paths lead to the calculation of X and Y: $X = U/R - U$ and $Y = (R \times U) - L$, with X rounded to the nearest hundredth. A decision 'X > 0?' follows. If 'No', it leads to 'Output reduce maxillary arch by the rounded X'. If 'Yes', it leads to 'Output increase maxillary arch by the rounded X'. Both paths lead to 'Round Y to nearest hundredth'. A decision 'Y > 0?' follows. If 'No', it leads to 'Output reduce mandibular arch by the rounded Y'. If 'Yes', it leads to 'Output increase mandibular arch by the rounded Y'. Both paths lead to a final output box: 'Output: Small if U is 44.5mm or less, Medium if 44.5 < U < 49.4, Large if U is 49.4 or more'. The process ends at an 'END' terminal.

FIGURE 3

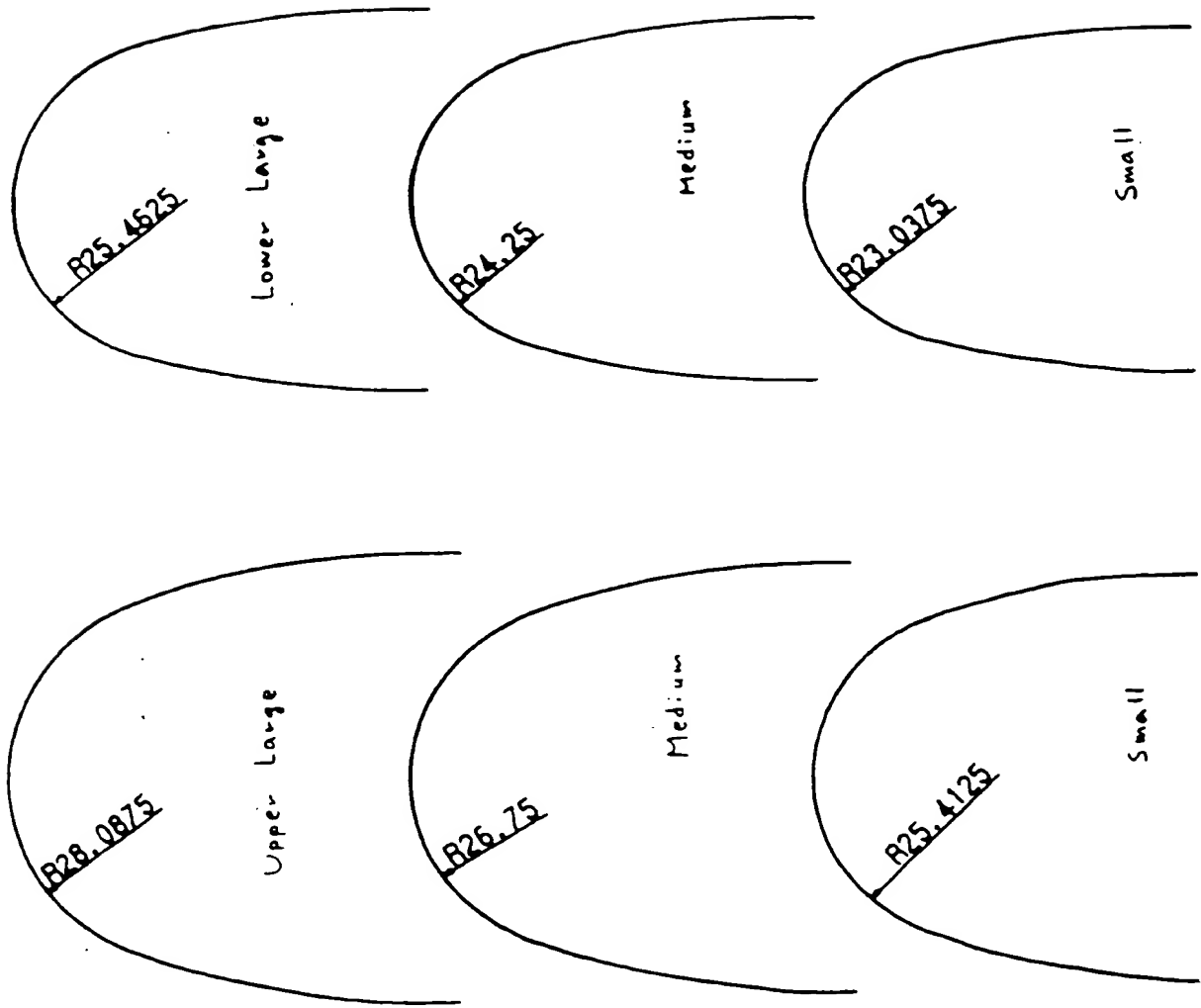


FIGURE 4